

**REMARKS**

The final Office Action of March 13, 2007, has been received and reviewed.

Claims 1-57 are currently pending and under consideration in the above-referenced application, each standing rejected.

Reconsideration of the above-referenced application is respectfully requested.

**Rejections under 35 U.S.C. § 102**

Claims 1-8, 11-16-47, 49-54, and 57 have been rejected under 35 U.S.C. § 102.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single reference which qualifies as prior art under 35 U.S.C. § 102. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Sumnitsch

Claims 1-8, 11-16, 35-40, 43, 44, 49-54, and 57 stand rejected under 35 U.S.C. § 102(b) for being drawn to subject matter that is allegedly anticipated by the subject matter described in U.S. Patent 4,903,717 to Sumnitsch (hereinafter "Sumnitsch").

As the Office has noted, Sumnitsch describes a system in a device for etching silicon wafers, or "etcher," is associated with a wafer carrier and a cleaning apparatus. Office Action of March 13, 2007, page 3; *see also* Sumnitsch, col. 4, lines 49-55; FIG. 3. The Office has asserted that there is "no structural requirement that... limits the apparatus" to a system in which material is selectively consolidated.

It is well known in the art of semiconductor device fabrication that an etcher removes material. It is, therefore, apparent that an etcher does not consolidate material and, thus, cannot be considered a programmable material consolidation system, as recited in independent claims 1 and 49. In addition to these requirements, it is proposed that independent claims 1 and 49 be amended to recite programmed material consolidation systems that include "a material

consolidation system that outputs consolidating energy,” and that material is selectively consolidated at a fabrication site by the consolidating energy.

Sumnitsch lacks any express or inherent description of a system including “a fabrication site at which material is selectively consolidated by... consolidating energy from [a] material consolidation system,” as recited in amended independent claim 1. Sumnitsch also lacks any express or inherent description of a system that includes “a fabrication site that contains a quantity of unconsolidated material to be selectively consolidated by... consolidating energy... directed to the fabrication site in [a] controlled, selective manner” by a material consolidation system, as recited in amended independent claim 49.

Further, Sumnitsch does not expressly or inherently describe a material reclamation system for returning unconsolidated material to the fabrication site or a reservoir in communication with the fabrication site, as recited in independent claim 49.

It is, therefore, respectfully submitted that independent claim 1 and independent claim 49 are both drawn to subject matter that, under 35 U.S.C. § 102(b), is allowable over the subject matter described in Sumnitsch.

Each of claims 2-8, 11-16, 35-40, 43, and 44 is allowable, among other reasons, for depending directly or indirectly from independent claim 1, which is allowable.

Claim 7 is additionally allowable because Sumnitsch does not expressly or inherently describe a material reclamation system configured to return unconsolidated material to a fabrication site or a reservoir in communication with the fabrication site. Instead, the disclosure of Sumnitsch is limited to a pump for removing etchants and etch products from an etcher (col. 5, lines 36 and 37).

Claim 8, which depends from claim 7, is further allowable since Sumnitsch does not expressly or inherently describe a material reclamation system that includes a conduit with a first end in communication with a receptacle for receiving unconsolidated material and a second end in communication with the fabrication site or a reservoir in communication with the fabrication site.

Claims 50-54 and 57 are each allowable, among other reasons, for depending directly or indirectly from independent claim 49, which is allowable.

Claim 50 is additionally allowable since Sumnitsch does not expressly or inherently describe a material reclamation system that is configured to transport unconsolidated material from a material removal location back to the fabrication site or to a reservoir in communication with the fabrication site.

Claim 51 depends from claim 50 and is also allowable because Sumnitsch includes no express or inherent description of a material reclamation system that includes at least one conduit configured to effect transportation of unconsolidated material from the material removal location to the fabrication site or reservoir.

Claim 52, which depends from claim 51, is further allowable since Sumnitsch lacks any express or inherent description of a filter positioned along the length of the at least one conduit.

Claim 53 depends from claim 52 and is additionally allowable because, in addition to lacking any express or inherent description of a filter, Sumnitsch neither expressly nor inherently describes a filter that is configured to permit unconsolidated, consolidatable material to pass therethrough.

#### Madsen

Claims 1, 16-36, 40, and 45-47 are rejected under 35 U.S.C. § 102(e) for reciting subject matter that is purportedly anticipated by the subject matter described in U.S. Patent 6,616,768 to Madsen (hereinafter "Madsen").

The disclosure of Madsen is limited to a system for perforating gypsum boards and removing dust from the perforations. No material is consolidated by the system described in Madsen. Nor does Madsen expressly or inherently describe that the system thereof includes a material consolidation system. Therefore, Madsen does not expressly or inherently describe a programmable material consolidation system that includes each and every element recited in amended independent claim 1.

It is, therefore, respectfully submitted that Madsen does not anticipate each and every element of independent claim 1, as would be required to maintain the 35 U.S.C. § 102(e) rejections of these claims.

Claims 16-36, 40, and 45-47 are each allowable, among other reasons, for depending directly or indirectly from independent claim 1, which is allowable.

Taniyama

Claims 1 and 40-44 have been rejected under 35 U.S.C. § 102(b) for being directed to subject matter that is assertedly anticipated by the disclosure of U.S. Patent 6,247,479 to Taniyama et al. (hereinafter “Taniyama”).

Taniyama describes an apparatus for washing and drying semiconductor wafers. The apparatus of Taniyama is not part of a programmed material consolidation system. Nor does the apparatus of Taniyama include a material consolidation system that outputs and selectively directs consolidating energy. Further, the apparatus of Taniyama lacks a fabrication site at which material is selectively consolidated by consolidating energy from a material consolidation system. Instead, the apparatus of Taniyama merely includes a spin chuck for holding a substrate (*e.g.*, a semiconductor wafer) as it is washed and dried.

It is, therefore, respectfully submitted that Taniyama does not expressly or inherently describe, or anticipate, each and every element of independent claim 1, as would be required to maintain the 35 U.S.C. § 102(b) rejection of independent claim 1.

Each of claims 40-44 is allowable, among other reasons, for depending directly or indirectly from independent claim 1, which is allowable.

Withdrawal of the 35 U.S.C. § 102 rejections of claims 1-8, 11-16-47, 49-54, and 57 is respectfully solicited, as is the allowance of each of these claims.

**Rejections under 35 U.S.C. § 103(a)**

Claims 9, 10, 48, 52, 53, and 56 stand rejected under 35 U.S.C. § 103(a).

Sumnitsch in View of Madsen

Claims 9, 10, 52, 53, 55, and 56 have been rejected under 35 U.S.C. § 103(a) for reciting subject matter which is assertedly unpatentable over the teachings of Sumnitsch in view of teachings from Madsen.

Claims 9 and 10 are both allowable, among other reasons, for depending indirectly from independent claim 1, which is allowable.

Claim 10 is further allowable because neither Sumnitsch nor Madsen teaches or suggests a filter that permits unconsolidated, consolidatable material to pass therethrough. Rather, the teachings of Sumnitsch and Madsen are limited to the removal of etchant and etch products from etchers.

Claims 52, 53, 55, and 56 are each allowable, among other reasons, for depending indirectly from independent claim 49, which is allowable.

Claims 53 and 56 are further allowable because Sumnitsch and Madsen both lack any teaching or suggestion of a filter that permits unconsolidated, consolidatable material to pass therethrough. Rather, the teachings of Sumnitsch and Madsen are limited to the removal of etchant and etch products from etchers.

Madsen

Claim 48 has been rejected under 35 U.S.C. § 103(a) for reciting subject matter which is assertedly unpatentable over the subject matter taught in Madsen.

Claim 48 is allowable, among other reasons, for depending indirectly from independent claim 1, which is allowable.

It is respectfully requested that the 35 U.S.C. § 103(a) rejections of claims 9, 10, 48, 52, 53, and 56 be withdrawn, and that each of these claims be allowed.

**Entry of Amendments**

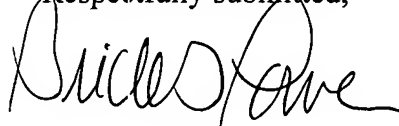
Entry of the proposed amendments to the claims of the above-referenced application is respectfully requested. It is respectfully submitted that the proposed amendments to independent claims 1 and 49 would eliminate any further issues for appeal without necessitating an additional search or introducing new matter into the above-referenced application.

In the event that the proposed amendments are not entered, their entry upon the filing of a Notice of Appeal in the above-referenced application is respectfully requested.

**CONCLUSION**

It is respectfully submitted that each of claims 1-57 is allowable. An early notice of the allowability of each of these claims is respectfully solicited, as is an indication that the above-referenced application has been passed for issuance. If any issues preventing allowance of the above-referenced application remain which might be resolved by way of a telephone conference, the Office is kindly invited to contact the undersigned attorney.

Respectfully submitted,



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